

[illegible]

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. AMAT/5017	Serial No. 09/917,842
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Chin, et al.	Confirmation No. 3573
(Use several sheets if necessary)		Filing Date July 27, 2001	Group 1762
Examiner Unknown			

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
ASR	A1	4,058,430	11/15/77	Suntola et al.	156	611	11/25/1975
	A2	4,389,973	06/28/83	Suntola et al.	118	725	12/11/1981
	A3	4,413,022	11/01/83	Suntola et al.	427	255.2	06/21/1979
	A4	4,486,487	12/04/84	Skarp	428	216	04/25/1983
	A5	4,767,494	08/30/88	Kobayashi et al.	156	606	09/19/1986
	A6	4,806,321	02/21/89	Nishizawa et al.	422	245	07/21/1985
	A7	4,829,022	05/09/89	Kobayashi et al.	437	107	12/09/1986
	A8	4,834,831	05/30/89	Nishizawa et al.	156	611	09/04/1987
	A9	4,838,983	06/13/89	Schumaker et al.	156	613	03/18/1988
	A10	4,838,993	06/13/89	Aoki et al.	156	643	12/03/1987
	A11	4,840,921	06/20/89	Matsumoto	437	89	06/30/1988
	A12	4,845,049	07/04/89	Sunakawa	437	81	03/28/1988
	A13	4,859,625	08/22/89	Nishizawa et al.	437	81	11/20/1987

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASR	✓ B1	01/66832 A2	09/13/2001	WO	C30B	16/44		X
	✓ B2	01/40541 A1	06/07/2001	WO	C23C	16/40		X
	✓ B3	01/36702 A1	05/25/2001	WO	C23C	16/00		X
	✓ B4	01/29893 A1	04/26/2001	WO	H01L	21/768		X
	✓ B5	01/29891 A1	04/26/2001	WO	H01L	21/768		X

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
ASR	C1	✓ Hultman, et al., "Review of the thermal and mechanical stability of TiN-based thin films", <i>Zeitschrift Fur Metallkunde</i> , 90(10) (Oct. 1999), pp. 803-813.
	C2	✓ Klaus, et al., "Atomic Layer Deposition of SiO ₂ Using Catalyzed and Uncatalyzed Self-Limiting Surface Reactions", <i>Surface Review & Letters</i> , 6(3&4) (1999), pp. 435-448.
Examiner ASR	Date Considered 3/1/02	

*EXAMINER: Initial if reference consid red, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not consid red. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5017		Serial No. 09/917,842	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Chin, et al.		Confirmation No. 3573	
(Use several sheets if necessary)					Filing Date July 27, 2001		Group 1762	
Examiner Unknown							2002	

APR 04 2002
PATENT & TRADEMARK OFFICE

RECEIVED
JUL 27 2002

U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
ASK	A14	4,859,627	08/22/89	Sunakawa	437	81	07/01/1988
	A15	4,861,417	08/29/89	Mochizuki et al.	156	610	03/24/1988
	A16	4,876,218	10/24/89	Pessa et al.	437	107	09/26/1988
	A17	4,927,670	05/22/1990	Erbil	427	255.3	06/22/1988
	A18	4,931,132	06/05/90	Aspnes et al.	156	601	10/07/1988
	A19	4,960,720	10/02/90	Shimbo	437	105	08/24/1987
	A20	4,975,252	12/04/90	Nishizawa et al.	422	245	05/26/1989
	A21	4,993,357	02/19/91	Scholz	118	715	12/21/1989
	A22	5,013,683	05/07/91	Petroff et al.	437	110	01/23/1989
	A23	5,082,798	01/21/92	Arimoto	437	108	09/27/1990
	A24	5,085,885	02/04/92	Foley et al.	477	38	09/10/1990
	A25	5,091,320	02/25/92	Aspnes et al.	437	8	06/15/1990
	A26	5,130,269	07/14/92	Kitahara et al.	437	111	04/25/1989
	A27	5,166,092	11/24/92	Mochizuki et al.	437	105	10/30/1990

F Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASK	B6	01/29280 A1	04/26/2001	WO	C23C	16/32		X
	B7	01/27347 A1	04/19/2001	WO	C23C	16/44		X
	B8	01/27346 A1	04/19/2001	WO	C23C	16/44		X
	B9	01/15220 A1	03/01/2001	WO	H01L	21/768		

RECEIVED

OTHER ART		
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
ASK	C3	Yamaguchi, et al., "Atomic-layer chemical-vapor-deposition of silicon dioxide films with extremely low hydrogen content", <i>Appl. Surf. Sci.</i> , Vol. 130-132 (1998), pp. 202-207.
	C4	George, et al., "Surface Chemistry for Atomic Layer Growth", <i>J. Phys. Chem.</i> , Vol. 100 (1996), pp. 13121-131.

Examiner ASK	Date Considered 3/4/02
--------------	------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5017		Serial No. 09/917,842	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Chin, et al.		Confirmation No. 3573	
(Use several sheets if necessary)					Filing Date July 27, 2001		Group 1762	
Examiner Unknown								

APR 04 2002
PATENT & TRADEMARK OFFICE

RECEIVED
APR 11 2002

U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
ASX	A28	5,225,366	07/06/93	Yoder	437	108	06/22/1990
	A29	5,246,536	09/21/93	Nishizawa et al.	156	610	03/10/1989
	A30	5,250,148	10/05/93	Nishizawa et al.	156	611	11/12/1991
	A31	5,254,207	10/19/93	Nishizawa et al.	156	601	11/30/1992
	A32	5,256,244	10/26/93	Ackerman	156	613	02/10/1992
	A33	5,270,247	12/14/93	Sakuma et al.	437	133	07/08/1992
	A34	5,278,435	01/11/94	Van Hove et al.	257	184	06/08/1992
	A35	5,281,274	01/25/94	Yoder	118	697	02/04/1993
	A36	5,290,748	03/01/94	Knuuttila et al.	502	228	07/16/1992
	A37	5,294,286	03/15/94	Nishizawa et al.	156	610	01/12/1993
	A38	5,296,403	03/22/94	Nishizawa et al.	437	133	10/23/1992
	A39	5,300,186	04/05/94	Kitahara et al.	156	613	04/07/1992
	A40	5,311,055	05/10/94	Goodman et al.	257	593	11/22/1991

Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASX	✓ B10	00/79576 A1	12/28/2000	WO	H01L	21/205		X
	✓ B11	00/79019 A1	12/28/2000	WO	C23C	16/00		X
	✓ B12	00/63957 A1	10/26/2000	WO	H01L	21/205		X

RECEIVED

OTHER ART		
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
ASX	✓ C5	George, et al., "Atomic layer controlled deposition of SiO ₂ and Al ₂ O ₃ using ABAB... Binary reaction sequence chemistry", <i>Appl. Surf. Sci.</i> , Vol. 82/83 (1994), pp. 460-467.
	✓ C6	Wise, et al., "Diethyldiethoxysilane as a new precursor for SiO ₂ growth on silicon", <i>Mat. Res. Soc. Symp. Proc.</i> , Vol. 334 (1994), pp. 37-43.

Examiner ASX	Date Considered 3/4/02
--------------	------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office				Docket No.		Serial No.		
(PTO Form 1449 modified)				AMAT/5017		09/917,842		
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT				Applicant		Confirmation		
(Use several sheets if necessary)				Chin, et al.		No. 3573		
Examiner Unknown				Filing Date		Group		
				July 27, 2001		1762		
U.S. Patent Documents								
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
ASX	A41	5,316,615	05/31/94	Copel	117	95	03/09/1993	
	A42	5,316,793	05/31/94	Wallace et al.	427	248.1	07/27/1992	
	A43	5,330,610	07/19/94	Eres et al.	117	86	05/28/1993	
	A44	5,336,324	08/09/94	Stall et al.	118	719	12/04/1991	
	A45	5,338,389	08/16/94	Nishizawa et al.	117	89	04/21/1993	
	A46	5,348,911	09/20/94	Jurgensen et al.	117	91	04/26/1993	
	A47	5,374,570	12/20/94	Nasu et al.	437	40	08/19/1993	
	A48	5,395,791	03/07/95	Cheng et al.	437	105	10/20/1993	
	A49	5,438,952	08/08/1995	Otsuka	117	84	01/31/1994	
	A50	5,439,876	08/08/95	Graf et al.	505	447	08/16/1993	
	A51	5,441,703	08/15/95	Jurgensen	422	129	03/29/1994	
	A52	5,443,033	08/22/95	Nishizawa et al.	117	86	03/11/1994	
	A53	5,443,647	08/22/95	Aucoin et al.	118	723 ME	07/11/1994	
	A54	5,455,072	10/03/95	Bension et al.	427	255.7	11/18/1992	
Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES NO	
ASX	B13	✓ 00/54320 A1	09/14/2000	WO	H01L	21/44		X
	B14	✓ 00/16377 A2	03/23/2000	WO	H01L	---		X
	B15	✓ 00/15881 A2	03/23/2000	WO	C30B	---		X
	B16	✓ 00/15865 A1	03/23/2000	WO	C23C	16/00		X
OTHER ART								
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.						
ASX	C7	✓ Niinisto, et al., "Synthesis of oxide thin films and overlayers by atomic layer epitaxy for advanced applications", <i>Mat. Sci. & Eng.</i> , Vol. B41 (1996), pp. 23-29.						
Examiner	ASX				Date Considered 3/4/03			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.								

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/50174/PR 5		Serial No. 99/917,842	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Chin, et al.		Confirmation No: 3573	
(Use several sheets if necessary)					Filing Date July 27, 2001		Group 1762	
Examiner Unknown								

APR 04 2002
PATENT & TRADEMARK OFFICE

RECEIVED
APR 5 2002
Technology Center 2100

U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
A3M	A55	5,458,084	10/17/95	Thorne et al.	117	89	12/09/1993
	A56	5,469,806	11/28/95	Mochizuki et al.	117	97	08/20/1993
	A57	5,480,818	01/02/96	Matsumoto et al.	437	40	02/09/1993
	A58	5,483,919	01/16/96	Yokoyama et al.	117	89	08/17/1994
	A59	5,484,664	01/16/96	Kitahara et al.	428	641	01/21/1994
	A60	5,503,875	04/02/96	Imai et al.	427	255.3	03/17/1994
	A61	5,521,126	05/28/96	Okamura et al.	437	235	06/22/1994
	A62	5,527,733	06/18/96	Nishizawa et al.	437	160	02/18/1994
	A63	5,532,511	07/02/96	Nishizawa et al.	257	627	03/23/1995
	A64	5,540,783	07/30/96	Eres et al.	118	725	05/26/1994
	A65	5,601,651	02/11/97	Watabe	118	715	12/14/1994
	A66	5,616,181	04/01/97	Yamamoto et al.	118	723 ER	11/21/1995
	✓	A67	5,637,530	06/10/97	Gaines et al.	114	105

Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
OK	✓	B17	99/41423 A2	08/19/1999	WO	C23C	---	X
✓	✓	B18	99/29924 A1	06/17/1999	WO	C23C	16/04	X
✓	✓	B19	99/01595	01/14/1999	WO	C30B	25/14	X
✓	✓	B20	96/18756 A1	06/20/1996	WO	C23C	16/08	X

RECEIVED
APR 11 2002
Technology Center 2100

OTHER ART		
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
OK	✓	C8 Ritala, et al., "Perfectly conformal TiN and Al ₂ O ₃ films deposited by atomic layer deposition", <i>Chemical Vapor Deposition</i> , Vol. 5(1) (January 1999), pp. 7-9.
✓	✓	C9 Klaus, et al., "Atomically controlled growth of tungsten and tungsten nitride using sequential surface reactions". <i>Appl. Surf. Sci.</i> , Vol 162-163 (2000), pp. 479-491.

Examiner A3M	Date Considered 3/4/03
--------------	------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5017		Serial No. 09/917,842	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Chin, et al.		Confirmation No. 3573	
(Use several sheets if necessary)					Filing Date July 27, 2001		Group 1762	
Examiner Unknown								

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
ADK	A68	5,641,984	06/24/97	Aftergut et al.	257	433	08/19/1994	
	A69	5,644,128	07/01/97	Wollnik et al.	250	251	08/25/1994	
	A70	5,693,139	12/02/97	Nishizawa et al.	117	89	06/15/1993	
	A71	5,705,224	01/06/98	Murota et al.	427	248.1	01/31/1995	
	A72	5,707,880	01/13/98	Aftergut et al.	437	3	01/17/1997	
	A73	5,711,811	01/27/98	Suntola et al.	118	711	11/28/1995	
	A74	5,730,802	03/24/98	Ishizumi et al.	118	719	12/27/1996	
	A75	5,747,113	05/05/98	Tsai	427	255.5	07/29/1996	
	A76	5,749,974	05/12/98	Habuka et al.	118	725	07/13/1995	
	A77	5,796,116	08/18/98	Nakata et al.	257	66	07/25/1995	
	A78	5,807,792	09/15/98	Ilg et al.	438	758	12/18/1996	
	A79	5,830,270	11/03/98	McKee et al.	117	106	08/05/1996	
	A80	5,835,677	11/10/98	Li et al.	392	401	10/03/1996	

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	✓ B21	96/17107 A1	06/06/1996	WO	C23C	16/44		X
	✓ B22	93/02111 A1	02/04/1993	WO	C08F	4/78		
	✓ B23	91/10510 A1	07/25/1991	WO	B01J	37/02		
	✓ B24	0 799 641 A2	10/08/1997	EP	B01J	20/32		

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
ADK	C10	Min, et al., "Atomic layer deposition of TIN thin films by sequential introduction of Ti precursor and NH/sub3", <i>Symp.: Advanced Interconnects and Contact Materials and Processes for Future Integrated Circuits</i> (Apr. 13-16, 1998), pp. 337-342.

Examiner ADK Date Considered 3/4/03

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5017		Serial No. 09/917,842	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Chin, et al.		Confirmation No. 3573	
(Use several sheets if necessary)					Filing Date July 27, 2001		Group 1762	
Examiner Unknown								

U.S. Patent Documents

*Examiner Initial	Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
✓	A81	5,851,849	Comizzoli et al.	438	38	05/22/1997
✓	A82	5,855,675	Doering et al.	118	719	03/03/1997
✓	A83	5,855,680	Soininen et al.	118	719	11/28/1995
✓	A84	5,858,102	Tsai	118	719	02/14/1998
✓	A85	5,879,459	Gadgil et al.	118	715	08/29/1997
✓	A86	5,904,565	Nguyen, et al.	438	687	07/17/1997
✓	A87	5,916,365	Sherman	117	92	08/16/1996
✓	A88	5,923,056	Lee et al.	257	192	03/12/1998
✓	A89	5,923,985	Aoki et al.	438	301	01/14/1997
✓	A90	5,925,574	Aoki et al.	437	31	04/10/1992
✓	A91	5,942,040	Kim et al.	118	726	08/27/1997
✓	A92	5,947,710	Cooper, et al.	418	63	06/16/1997
✓	A93	5,972,430	DiMeo, Jr. et al.	427	255.32	11/26/1997

Foreign Patent Documents

*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						YES	NO
✓	B25	0 442 490 A1	08/21/1991	EP	C30B	25/02	X
✓	B26	0 344 352 A1	12/06/1989	EP	H01L	39/24	X
✓	B27	62-091495 A	04/25/1987	JP	C30B	25/02	X

OTHER ART

*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
✓	C11 Klaus, et al., "Atomic Layer Deposition of Tungsten using Sequential Surface Chemistry with a Sacrificial Stripping Reaction," Thin Solid Films 360 (2000), Pages 145 – 153, (Accepted Nov. 16, 1999).
✓	C12 Min, et al., "Metal-Organic Atomic-Layer Deposition of Titanium-Silicon-Nitride Films", Applied Physics Letters, American Inst. Of Physics, Vol 75(11) (Sept. 13, 1999).

Examiner BX	Date Considered 3/4/03
----------------	---------------------------

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5017		Serial No. 09/917,842	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Chin, et al.		Confirmation No. 3573	
(Use several sheets if necessary)					Filing Date July 27, 2001		Group 1762	
Examiner Unknown								

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
BK	A94	6,001,669	12/14/99	Gaines et al.	438	102	07/21/1992
	A95	6,015,590	01/18/00	Suntola et al.	427	255.23	11/28/1995
	A96	6,025,627	02/15/00	Forbes et al.	257	321	05/29/1998
	A97	6,036,773	03/14/00	Wang et al.	117	97	03/27/1997
	A98	6,043,177	03/28/00	Falconer et al.	502	4	01/21/1997
	A99	6,124,158	09/26/00	Dautartas et al.	438	216	06/08/1999
	A100	6,113,977	09/05/00	Soininen et al.	427	64	09/11/1997
	A101	6,130,147	10/10/00	Major et al.	438	604	03/18/1997
	A102	6,139,700	10/31/00	Kang et al.	204	192.17	09/30/1998
	A103	6,174,377	01/16/2001	Doering, et al.	118	729	01/04/1999
	A104	6,174,809	01/16/2001	Kang, et al.	438	682	12/15/1998
	A105	6,200,893	03/13/2001	Sneh	438	685	03/11/1998

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	✓ B28	60-065712 A	04/15/1985	JP	C01B	33/113		X
	✓ B29	03-048421	03/01/1991	JP	H01L	21/302		X
	✓ B30	03-286531	12/17/1991	JP	H01L	21/316		X

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	✓ C13	Martensson, et al., "Atomic Layer Epitaxy of Copper on Tantalum", <i>Chemical Vapor Deposition</i> , 3(1) (Feb. 1, 1997), pp. 45-50.
	✓ C14	Ritala, et al. "Atomic Layer Epitaxy Growth of TiN Thin Films", <i>J. Electrochem. Soc.</i> , 142(8) (Aug. 1995), pp. 2731-737.
	✓ C15	Elers, et al., "NbC15 as a precursor in atomic layer epitaxy", <i>Appl. Surf. Sci.</i> , Vol. 82/83 (1994), pp. 468-474.

Examiner BK	Date Considered 3/4/03
-------------	------------------------

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. AMAT/5017		Serial No. 09/917842	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Chin, et al.		Confirmation No. 3573	
(Use several sheets if necessary)		Filing Date July 27, 2001		Group 1762	
Examiner Unknown					

APR 04 2002
PATENT & TRADEMARK OFFICE

U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
AK	A106	6,203,613	03/20/2001	Gates, et al.	117	104	10/19/1999
	A107	6,207,302	03/27/2001	Sugiura, et al.	428	690	03/02/1998
	A108	6,248,605	06/19/2001	Harkonen, et al.	438	29	06/02/1999
	A109	6,270,572	08/07/2001	Kim, et al.	117	93	08/09/1999
	A110	6,287,965	09/11/2001	Kang, et al.	438	648	02/23/2000
	A111	6,291,876	09/18/2001	Stumborg, et al.	257	632	08/20/1998
	A112	6,305,314	10/23/2001	Sneh, et al.	118	723 R	12/17/1999
	A113	6,306,216	10/23/2001	Kim, et al.	118	725	07/12/2000
	A114	6,316,098	11/13/2001	Yitzchaik, et al.	428	339	03/23/1999
	A115	2001/0000866	05/10/2001	Sneh, et al.	118	723 R	11/29/2000
	A116	2001/0009140	07/26/2001	Bondestam, et al.	118	725	01/25/2001

Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B31	✓ 04-031396 A	02/03/1992	JP	C30B	25/14		X
	B32	✓ 06-291048	10/18/1994	JP	H01L	21/205		X
	B33	✓ 08-264530	10/11/1996	JP	H01L	21/3205		X
	B34	✓ 11-269652	10/05/1999	JP	C23C	16/44		X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
	C16 ✓ Lee, "The Preparation of Titanium-Based Thin Film by CVD Using Titanium Chlorides as Precursors", <i>Chemical Vapor Deposition</i> , 5(2) (Mar. 1999), pp. 69-73.
	C17 ✓ Martensson, et al., "Atomic Layer Epitaxy of Copper, Growth & Selectivity in the Cu (II)-2,2,6,6-Tetramethyl-3, 5-Heptanedion ATE/H ₂ Process", <i>J. Electrochem. Soc.</i> , 145(8) (Aug. 1998), pp. 2926-2931.

Examiner AK	Date Considered 3/4/03
-------------	------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)				Docket No. AMAT/50175		Serial No. 09/917,842	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT				Applicant Chin, et al.		Confirmation No. 3573	
(Use several sheets if necessary)				Filing Date July 27, 2001		Group 1762	
Examiner Unknown							

APR 04 2002
PATENT & TRADEMARK OFFICE

U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
ASX	A117	2001/0011526	08/09/2001	Doering, et al.	118	729	01/16/2001
↓	A118	2001/0031562	10/18/2001	Raaijmakers, et al.	438	770	02/22/2001
↓	A119	2001/0034123	10/25/2001	Jeon, et al.	438	643	04/06/2001
	A120						
	A121						
	A122						

Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASX	✓ B35	2001-62244	03/13/2001	JP	B01D	53/34		X
↓	✓ B36	198 20 147	07/01/1999	DE	H01L	21/3205		X
↓	✓ B37	196 27 017	01/09/1997	DE	H01L	21/283		X
↓	✓ B38	2 626 110	07/21/1989	FR	H01L	39/24		X
↓	✓ B39	2 692 597	12/24/1993	FR	C23C	16/00		X
↓	✓ B40	2 355 727A	05/02/2001	GB	C23C	16/44		X

RECEIVED
APR 11 2002
Technology Center 2100

OTHER ART		
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
ASX	✓ C18	Min, et al., "Chemical Vapor Deposition of Ti-Si-N Films with Alternating Source Supply", <i>Mat., Res. Soc. Symp. Proc.</i> , Vol. 564 (Apr. 5, 1999), pp. 207-210
↓	✓ C19	Bedair, "Atomic layer epitaxy deposition processes", <i>J. Vac. Sci. Technol.</i> 12(1) (Jan/Feb 1994)
↓	✓ C20	Yamaga, et al., "Atomic layer epitaxy of ZnS by a new gas supplying system in a low-pressure metalorganic vapor phase epitaxy", <i>J. of Crystal Growth</i> 117 (1992), pp. 152-155
↓	✓ C21	Elam, et al., "Nucleation and growth during tungsten atomic layer deposition on SiO ₂ surfaces," <i>Thin Solid Films</i> 386 (2001) Pages 41 – 52, (Accepted Dec. 14, 2000).
Examiner ASX		Date Considered 3/1/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5017	09/917,842
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant	Confirmation No.:
		Chin, et al.	3573
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		July 27, 2001	1762

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
ASX	A1	2001/0042799	11/22/2001	Kim, et al.	239	553	02/02/2001

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
ASX	C1	"Cluster Tools for Fabrication of Advanced devices" Jap. J. of Applied Physics, Extended Abstracts, 22 nd Conference Solid State Devices and Materials (1990), pp. 849 - 852
↓	C2	Kitigawa, et al., "Hydrogen-mediated low temperature epitaxy of Si in plasma-enhanced chemical vapor deposition", Applied Surface Science (2000), pp. 30-34
↓	C3	Lee, et al., "Pulsed nucleation for ultra-high aspect ratio tungsten plugfill", Novellus Systems, Inc. (2001), pp. 1-2 (COPY NOT AVAILABLE TO APPLICANT AT THIS TIME)

Examiner ASX	Date Considered 3/4/03
--------------	------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)				Docket No. APPM/5017		Serial No. 09/917,842	
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT				Applicant Chin, et al.		Confirmation No.: 3563	
(Use several sheets if necessary)				Filing Date July 27, 2001		Group 162	
Examiner Unknown							

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
AJK	A1	4,813,846	03/21/89	Helms	414	744.1	04/29/87
	A2	4,917,556	04/17/90	Stark et al.	414	217	05/26/89
	A3	4,951,601	08/28/90	Maydan, et al.	118	719	06/23/89
	A4	5,000,113	03/19/91	Wang et al.	118	723	12/19/86
	A5	5,028,565	07/02/91	Chang, et al.	437	192	08/25/89
	A6	5,173,474	12/22/92	Connell, et al.	505	1	03/11/91
	A7	5,186,718	02/16/93	Tepman et al.	29	25.01	04/15/91
	A8	5,205,077	04/27/93	Wittstock	51	165 R	08/28/91
	A9	5,234,561	08/10/93	Randhawa et al.	204	192.38	08/25/88
	A10	5,259,881	11/09/93	Edwards, et al.	118	719	05/17/91
	A11	5,286,296	02/15/94	Sato et al.	118	719	01/09/92
	A12	5,580,380	12/03/96	Liu et al.	117	86	01/30/95
	A13	5,609,689	03/11/97	Kato et al.	118	719	06/03/96
	A14	5,667,592	09/16/97	Boitnott et al.	118	719	04/16/96
	A15	5,674,786	10/07/97	Turner et al.	437	225	06/05/95
	A16	5,695,564	12/09/97	Imahashi	118	719	08/03/95
	A17	5,730,801	03/24/98	Tepman et al.	118	719	08/23/94
	A18	5,788,447	08/04/98	Yonemitsu et al.	414	217	08/05/96
	A19	5,788,799	08/04/98	Steger, et al.	156	345	06/11/96
	A20	5,801,634	09/01/98	Young et al.	340	635	09/08/97
	A21	5,856,219	01/05/99	Naito et al.	438	241	08/18/97
	A22	5,866,213	02/02/99	Foster et al.	427	573	07/19/97
	A23	5,866,795	02/02/99	Wang et al.	73	1.36	03/17/97
	A24	5,882,165	03/16/99	Maydan et al.	414	217	09/10/97
	A25	5,882,413	03/16/99	Beaulieu et al.	118	719	07/11/97
✓	A26	5,928,389	07/27/99	Jevtic	29	25.01	10/21/96

Examiner AJK	Date Considered 3/4/03
--------------	------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

RECEIVED

[illegible]

RECEIVED
APR 18 2002
Technology Center 2100

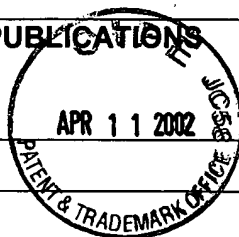
***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

APR 18 2002

Sheet 3 of 11 sheet(s)

Technology Center 2100

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5017	Serial No. 09/917,842
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Chin, et al.	Confirmation No. 3573
(Use several sheets if necessary)		Filing Date July 27, 2001	Group 1769
Examiner Unknown			



RECEIVED
 APR 15 2002
 1769

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASX	B1	58-098917	06/13/1983	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B2	58-100419	06/15/1983	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B3	61-035847	02/20/1986	JP	B01J	19/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B4	61-210623	09/18/1986	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B5	62-069508	03/30/1987	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B6	62-141717	06/25/1987	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B7	62-167297	07/23/1987	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B8	62-171999	07/28/1987	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B9	62-232919	10/13/1987	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B10	63-062313	03/18/1988	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B11	63-085098	04/15/1988	JP	C30B	21/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B12	63-090833	04/21/1988	JP	H01L	21/365	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B13	63-222420	09/16/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B14	63-222421	09/16/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B15	63-227007	09/21/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B16	63-252420	10/19/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B17	63-266814	11/02/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B18	64-009895	01/13/1989	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B19	64-009896	01/13/1989	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B20	64-009897	01/13/1989	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B21	64-037832	02/08/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B22	64-082615	03/28/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B23	64-082617	03/28/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B 24	64-082671	03/28/1989	JP	H01L	29/78	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner ASX Date Considered 3/4/03

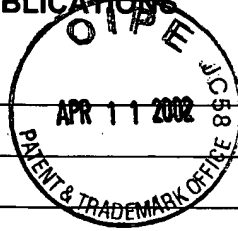
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

APR 18 2002

Sheet 4 of 11 sheet(s)

Technology Center 2100

U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5017	09/917,842
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant	Confirmation No.
		Chin, et al.	3573
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		January 18, 2001	1762

RECEIVED
APR 5 2002
10:00**F r i g n Patent Documents**

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASX	B25	64-082676	03/28/1989	JP	H01L	29/80	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B26	64-090524	04/07/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B27	01-103982	04/21/1989	JP	C30B	23/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B28	01-103996	04/21/1989	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B29	01-117017	05/09/1989	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B30	01-143221	06/05/1989	JP	H01L	21/314	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B31	01-143233	06/05/1989	JP	H01L	21/76	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B32	01-154511	06/16/1989	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B33	01-236657	09/21/1989	JP	H01L	29/80	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B34	01-245512	09/29/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B35	01-264218	10/20/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B36	01-270593	10/27/1989	JP	C30B	25/02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B37	01-272108	10/31/1989	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B38	01-290221	11/22/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B39	01-290222	11/22/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B40	01-296673	11/30/1989	JP	H01L	29/88	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B41	01-303770	12/07/1989	JP	H01L	39/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B42	01-305894	12/11/1989	JP	C30B	23/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B43	01-313927	12/19/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B44	02-012814	01/17/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B45	02-014513	01/18/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B46	02-017634	01/22/1990	JP	H01L	21/225	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B47	02-063115	03/02/1990	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B48	02-074029	03/14/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner ASX	Date Considered 3/4/03
--------------	------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

RECEIVED

APR 18 2002

Technology Center 2100

Sheet 5 of 11 sheet(s)

U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5017	09/917,842
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant	Confirmation No.:
		Chin, et al.	3573
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		July 27, 2001	1762



Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
A3K	B49	02-074587	03/14/1990	JP	C30B	23/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B50	02-106822	04/18/1990	JP	H01B	13/00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B51	02-129913	05/18/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B52	02-162717	06/22/1990	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B53	02-172895	07/04/1990	JP	C30B	29/36	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B54	02-196092	08/02/1990	JP	C30B	25/14	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B55	02-203517	08/13/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B56	02-230690	09/13/1990	JP	H05B	33/10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B57	02-230722	09/13/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B58	02-246161	10/01/1990	JP	H01L	29/784	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B59	02-264491	10/29/1990	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B60	02-283084	11/20/1990	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B61	02-304916	12/18/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B62	03-019211	01/28/1991	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B63	03-022569	01/30/1991	JP	H01L	29/804	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B64	03-023294	01/31/1991	JP	C30B	25/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B65	03-023299	01/31/1991	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B66	03-044967	02/26/1991	JP	H01L	29/48	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B67	03-070124	03/26/1991	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B68	03-185716	08/13/1991	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B69	03-208885	09/12/1991	JP	C30B	23/02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B70	03-234025	10/18/1991	JP	H01L	21/318	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B71	03-286522	12/17/1991	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B72	04-031391	02/03/1992	JP	C30B	23/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner A3K

Date Considered 3/4/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

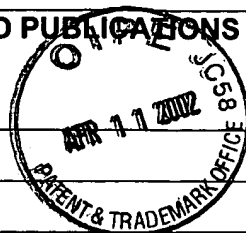
RECEIVED

APR 18 2002

Technology Center 2100

Sheet 6 of 11 sheet(s)

U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5017	09/917842
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant	Confirmation No.:
		Chin, et al.	3573
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		July 27, 2001	1762



Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASX	B73	04-031396	02/03/1992	JP	C30B	25/14	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B74	04-100292	04/02/1992	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B75	04-111418	04/13/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B76	04-132214	05/06/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B77	04-132681	05/06/1992	JP	C30B	25/14	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B78	04/151822	05/25/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B79	04-162418	06/05/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B80	04-175299	06/23/1992	JP	C30B	29/68	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B81	04-186824	07/03/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B82	04-212411	08/04/1992	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B83	04-260696	09/16/1992	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B84	04-273120	09/29/1992	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B85	04-285167	10/09/1992	JP	C23C	14/54	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B86	04-291916	10/16/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B87	04-325500	11/13/1992	JP	C30B	33/00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B88	04-328874	11/17/1992	JP	H01L	29/804	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B89	05-029228	02/05/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B90	05-047665	02/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B91	05-047666	02/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B92	05-047668	02/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B93	05-074717	03/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B94	05-074724	03/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B95	05-102189	04/23/1993	JP	H01L	21/336	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B96	05-160152	06/25/1993	JP	H01L	21/336	<input checked="" type="checkbox"/>	<input type="checkbox"/>

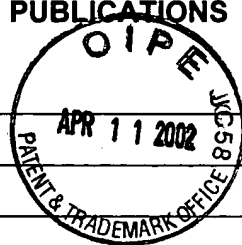
Examiner ASX Date Considered 3/4/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

RECEIVED
APR 1 8 2002
Technology Center 2100

Sheet 7 of 11 sheet(s)

RECEIVED
APR 1 8 2002
TC 2100



U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5017	Serial No. 09/917142
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Chin, et al.	Confirmation No.: 3573
(Use several sheets if necessary)		Filing Date July 27, 2001	Group 1762
Examiner Unknown			

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASX	B97	05-175143	07/13/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B98	05-175145	07/13/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B99	05-182906	07/23/1993	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B100	05-186295	07/27/1993	JP	C30B	25/02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B101	05-206036	08/13/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B102	05-234899	09/10/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B103	05-235047	09/10/1993	JP	H01L	21/338	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B104	05-251339	09/28/1993	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B105	05-270997	10/19/1993	JP	C30B	29/68	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B106	05-283336	10/29/1993	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B107	05-291152	11/05/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B108	05-304334	11/16/1993	JP	H01L	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B109	05-343327	12/24/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B110	05-343685	12/24/1993	JP	H01L	29/784	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B111	06-045606	02/18/1994	JP	H01L	29/784	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B112	06-132236	05/13/1994	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B113	06-177381	06/24/1994	JP	H01L	29/784	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B114	06-196809	07/15/1994	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B115	06-222388	08/12/1994	JP	G02F	1/136	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B116	06-224138	08/12/1994	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B117	06-230421	08/19/1994	JP	G02F	1/136	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B118	06-252057	09/09/1994	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B119	07-070752	03/14/1995	JP	C23C	16/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B120	07-086269	03/13/1995	JP	H01L	21/314	<input checked="" type="checkbox"/>	<input type="checkbox"/>

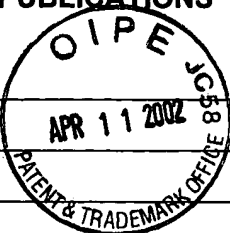
Examiner ASX Date Considered 3/4/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

APR 18 2002
Technology Center 2100

Sheet 8 of 11 sheet(s)

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)						Docket No. APPM/5017		Serial No. 09/917,842	
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT						Applicant Chin, et al.		Confirmation No. 3573	
(Use several sheets if necessary)						Filing Date July 27, 2001		Group 1762	
Examiner Unknown									



Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
ASX	B121	07-086269	03/13/1995	JP	H01L	21/314	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B122	08-181076	07/12/1996	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B123	08-245291	09/24/1996	JP	C30B	25/14	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B124	09-260786	10/03/1997	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B125	09-293681	11/11/1997	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B126	10-188840	07/21/1998	JP	H01J	29/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B127	10-190128	07/21/1998	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B128	10-308283	11/17/1998	JP	H05B	33/22	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B129	11-269652	10/05/1999	JP	C23C	16/44	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B130	2000-031387	01/28/2000	JP	H01L	27/04	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B131	2000-058777	02/25/2000	JP	H01L	27/108	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B132	2000-068072	03/03/2000	JP	H05B	33/22	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B133	2000-087029	03/28/2000	JP	C09K	11/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B134	2000-138094	05/16/2000	JP	H05B	33/10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B135	2000-218445	08/08/2000	JP	B23P	6/00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B136	2000-319772	11/21/2000	JP	C23C	14/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B137	2000-319772	03/28/2000	JP	C23C	16/00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B138	2000-340883	12/08/2000	JP	H01S	5/125	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B139	2000-353666	12/19/2000	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B140	2001-020075	01/23/2001	JP	C23C	16/44	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B141	2001-152339	06/05/2001	JP	C23C	16/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B142	2001-172767	06/26/2001	JP	C23C	16/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B143	2001-189312	07/10/2001	JP	H01L	21/316	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B144	2001-217206	08/10/2001	JP	H01L	21/285	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B145	2001-220287	08/14/2001	JP	C30B	25/02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B146	2001-220294	08/14/2001	JP	C30B	29/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner ASX	Date Considered 3/4/03
--------------	------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

RECEIVED

RECEIVED
APR 18 2002
Technology Center 2100

APR 18 2002
Technology Center 2100

Sheet 10 of 11 sheet(s)

RECEIVED
APR 15 2002
TC 1

OFFICE
APR 11 2002
PATENT & TRADEMARK OFFICE

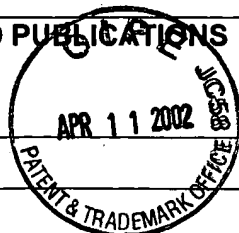
U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5017	Serial No. 09/017,842
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Chin, et al.	Confirmation No.: 3573
(Use several sheets if necessary)		Filing Date July 27, 2001	Group 1762
Examiner Unknown			

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
ASX	C1	Ohba, et al., "Thermal Decomposition of Methylhydrazine and Deposition Properties of CVD TiN Thin Films", Conference Proceedings, Advanced Metallization for ULSI Applications in 1993 (1994), pp. 143-149
	C2	Scheper, et al., "Low-temperature deposition of titanium nitride films from dialkylhydrazine-based precursors", Materials Science in Semiconductor Processing 2 (1999), pp. 149-157
	C3	Suzuki, et al., "A 0.2- μ m contact filing by 450°C-hydrazine-reduced TiN film with low resistivity", IEDM 92-979, pp. 11.8.1 - 11.8.3
	C4	Suzuki, et al., "LPCVD-TiN Using Hydrazine and TiCl ₄ ", VMIC Conference (June 8-9, 1993), pp. 418-423
	C5	IBM Tech. Disc. Bull. "Knowledge-Based Dynamic Scheduler in Distributed Computer Control, (June 1990), pp. 80-84
	C6	IBM Tech. Disc. Bull. "Multiprocessor and Multitasking Architecture for Tool Control of the Advanced via Inspection Tools" (May 1992), pp. 190-191
	C7	McGeachin, S., "Synthesis and properties of some β -diketimines derived from acetylacetone, and their metal complexes", Canadian J. of Chemistry, Vol. 46 (1968), pp.1903-1912
	C8	Solanki, et al., "Atomic Layer deposition of Copper Seed Layers", Electrochemical and Solid State Letters, 3(10) (2000), pp. 479-480
	C9	NERAC.COM Retro Search: Atomic Layer Deposition of Copper, dated October 11, 2001
	C10	NERAC.COM Retro Search: Atomic Layer Deposition / Epitaxy Aluminum Oxide Plasma, dated October 2, 2001
	C11	NERAC Search abstract of "Atomic Layer deposition of Ta and Ti for Interconnect Diffusion Barriers", by Rossnagel, et al., J. Vac. Sci. & Tech., 18(4) (July 2000)
	C12	Abstracts of articles re atomic layer deposition
	C13	Abstracts of search results re atomic layer deposition, search dated January 24, 2002
	C14	Abstracts of articles re atomic layer deposition and atomic layer nucleation
	C15	Abstracts of articles re atomic layer deposition and semiconductors and copper
Examiner ASX	Date Considered 3/4/03	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5017	Serial No. 097017,842
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Chin, et al.	Confirmation No.: 3573
(Use several sheets if necessary)		Filing Date July 27, 2001	Group 1762
Examiner Unknown			



OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
ASX	C16	Abstracts of articles – atomic layer deposition
	C17	NERAC Search – Atomic Layer Deposition, search dated October 16, 2001
	C18	Bader, et al., "Integrated Processing Equipment", Solid State Technology, Cowan Pub., Vol. 33, No. 5 (May 1, 1990), pp. 149-154
	C19	Choi, et al., "The effect of annealing on resistivity of low pressure chemical vapor deposited titanium diboride", J. Appl. Phys. 69(11) (June 1, 1991), pp. 7853-7861
	C20	Choi, et al., "Stability of TiB ₂ as a Diffusion Barrier on Silicon", J. Electrochem. Soc. 138(10) (October 1991), pp. 3062-3067
	C21	"Cluster Tools for Fabrication of Advanced devices" Jap. J. of Applied Physics, Extended Abstracts, 22 nd Conference Solid State Devices and Materials (1990), pp. 849 – 852 XP000178141 (ARTICLE ON ORDER – TO BE PROVIDED)
	C22	"Applications of Integrated processing", Solid State Technology, US, Cowan Pub., Vol 37, No. 12 (December 1, 1994), pp. 45-47
	C23	Kitigawa, et al., "Hydrogen-mediated low temperature epitaxy of Si in plasma-enhanced chemical vapor deposition", Applied Surface Science (2000), pp. 30-34 (ARTICLE ON ORDER – TO BE PROVIDED)
	C24	Lee, et al., "Pulsed nucleation for ultra-high aspect ratio tungsten plugfill", Novellus Systems, Inc. (2001), pp. 1-2 (ARTICLE ON ORDER – TO BE PROVIDED)

Examiner <u>ASX</u>	Date Considered <u>3/4/03</u>
---------------------	-------------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.